



## What is the HECTOR Project

Hydrogen Waste Collection Vehicles in North West Europe will deploy and test 7 fuel cell garbage trucks, in 7 pilot sites across the north west Europe area.

Fuel cell garbage trucks are in the pilot phase and this project will test the operational performance of these heavy-duty vehicles against diesel equivalents.

The pilot trucks are being custom built to suit operator needs and will be tested on a variety of routes including urban and rural to fully road test their capabilities under normal operational conditions.

The project will run until early 2023.

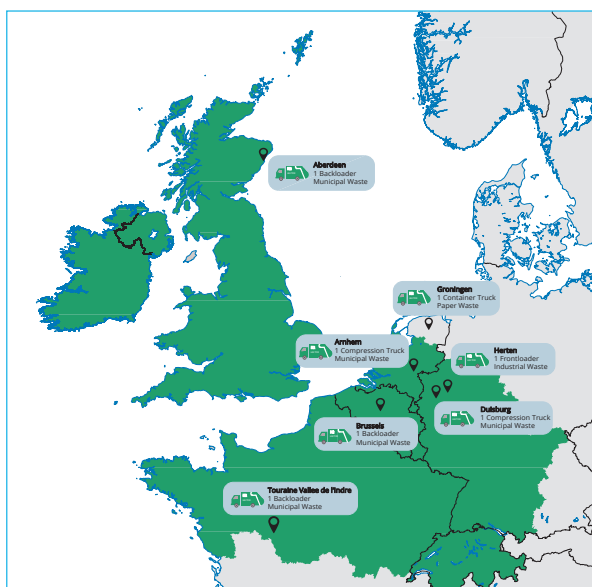
## Progress to Date

All 7 pilot vehicles have been ordered and are currently being built by the manufacturers.

The procurement process aimed to utilise the power of the partnership to reduce costs however because each vehicle is so specialised this was not possible.

Instead the procurement has resulted in 4 different manufacturers being involved with this project.

Delivery of vehicles will begin from end 2020 - early 2021.



## What have we learned so far?

- The price of a fuel cell garbage truck is currently around 2-3 times higher than that of a diesel equivalent due to the cost of the base vehicle plus the additional conversion to fuel cell technology.
- One of the aims of the project is to bring this price down through economies of scale, however due to the custom nature of garbage trucks it was difficult to benefit from this through the procurement phase across the different operators as each vehicle needed to meet a different specification.



## Spotlight on Groningen

The Groningen truck will be used mainly within the City centre of Groningen (an urban area) to collect paper from underground containers and above ground collection banks, 5 or 6 days per week.

The truck is comprised of a DAF chassis which will be customised with a crane, compaction body and crane weighing system. E-trucks are responsible for the fuel cell integration.

The truck will be refuelled from a nearby refuelling station which produces green hydrogen using solar panels. The truck can hold 15kg of hydrogen and it is expected that it will take approximately 10 minutes to refuel at 350 bar.

Groningen is also a partner in the Revive, HyTrEc2 and HEAVENN projects. These European funded projects, together with HECTOR, focus on the transition from diesel to hydrogen vehicles. By taking part in these projects Groningen hope to compare the application of hydrogen on a larger scale and of course use the knowledge to input to the Hector project.

By the end of 2020, Groningen aim to have 25 hydrogen vehicles in operation including 4 machinery vehicles, 4 cars, 9 vans and 8 trucks.

## Upcoming Milestones

Delivery of trucks  
Starting from  
**End 2020 - Early 2021**



Mid-Term Conference  
**June 2021**

## Contacts:

If you would like to know more about the HECTOR project:

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